

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A self-compacting, fiber-reinforced engineered cementitious composite comprising:

cementitious material comprising:

cement and sand;

at least one polymeric thickener;

at least one superplasticizer; and

water; and

from 0.5 to 10 volume % of hydrophilic reinforcing fibers having a modulus (E) of about 35-50 GPa and a percent elongation of about 3-20%.

2. (Original) The composite of claim 1 wherein the hydrophilic fibers comprise polyvinyl alcohol fibers.

3. (Original) The composite of claim 1 further comprising hydrophobic fibers.

4. (Original) The composite of claim 1 wherein the hydrophilic fibers have a tenacity of about 1000 - 2500 MPa.

5. (Cancelled).

6. (Currently Amended) The composite of claim 5 wherein the hydrophilic fibers have a modulus (E) of about [[30 - 60]] 40 - 45 GPa.

7. (Original) The composite of claim 6 wherein the hydrophilic fibers have a diameter of about 10 - 60 μm .

8. (Original) The composite of claim 7 wherein the hydrophilic fibers have a length of about 5 - 30 mm.

9. (Original) The composite of claim 1 wherein the hydrophilic fibers are coated with an oiling agent.

10. (Currently Amended) A method of making a composite structural material (engineered cementitious composite), said method comprising:

mixing from 0.5 to 10 volume % of hydrophilic reinforcing fibers having a modulus (E) of about 35-50 GPa and a percent elongation of about 3-20% with cementitious material comprising cement and sand, at least one polymeric thickener, at least one superplasticizer, and water.

11. (Original) The method of claim 10 wherein the hydrophilic fibers comprise polyvinyl alcohol fibers.

12. (Original) The method of claim 10 further comprising hydrophobic fibers.

13. (Original) The method of claim 10 wherein the hydrophilic fibers have a tenacity of about 1000 - 2500 MPa.

14. (Currently Amended) The method of claim 13 wherein the hydrophilic fibers have a modulus (E) of about [[30 - 60]] 40 - 45 GPa.

15. (Original) The method of claim 14 wherein the hydrophilic fibers have a diameter of about 10 - 60 μm .

16. (Original) The method of claim 15 wherein the hydrophilic fibers have a length of about 5 - 30 mm.

17. (Original) The method of claim 10 wherein the composite structural material is case without the use of any external vibration.

18. (Original) The method of claim 16 wherein the composite structural material is case without the use of any external vibration.

19. (Currently Amended) The method of claim [[9]] 10 wherein the hydrophilic fibers are coated with an oiling agent.

20. (Currently Amended) A method of making a composite structural material (engineered cementitious composite), said method comprising:

- 1) mixing powders of dry cement, sand, fly ash and defoamer;
- 2) mixing the dry powder mixture of 1) with water;
- 3) mixing an aqueous solution of cellulose compound with the mixture of 2);
- 4) mixing an aqueous solution of superplasticizer with the mixture of 3); and
- 5) mixing hydrophilic fibers having a modulus (E) of about 35-50 GPa and a percent elongation of about 3-20% with the mixture of 4).

21. (Original) The method of claim 20 wherein the components and the mixture of 2) are mixed for about 2 minutes, wherein the components of mixture 3) are mixed for about 5 to 10 minutes, and wherein the components of mixture 4) are mixed for about 2 minutes.

22. (Original) The method of claim 21 wherein additional water is mixed with the mixture of 5).

23. (Original) The method of claim 20 wherein the reinforcing hydrophilic fibers are pre-soaked in water before being mixed with the mixture of 4).

24. (Original) The method of claim 20 wherein the hydrophilic fibers are in random, discontinuous form.

25. (Original) The method of claim 20 wherein the hydrophilic fibers are provided in a bundle form.

26. (New) The composite of claim 1 wherein the components are present in sufficient amounts such that when the composite is cured the resulting cured product has a first crack strength of 2.1-2.6 MPa and an ultimate tensile strength of 2.8-3.8 MPa.

27. (New) The composite of claim 26 wherein the components are present in sufficient amounts such that when the composite is cured the resulting cured product has a tensile strain capacity of 3-7.5%.

28. (New) The composite of claim 1 wherein the components are provided in such amounts that the composite has a water-cement ratio of about 25 wt% to about 60 wt%, a sand-cement ratio of about 20 wt% to about 160 wt%, a thickener-cement ratio of about 0.001 wt% to about 0.5 wt%, and a superplasticizer-cement ratio of about 0.1 wt% to about 5 wt%.

29. (New) The composite of claim 9 wherein the fibers have been coated with 0.5-1.5 weight percent of the oiling agent.

30. (New) The composite of claim 9 wherein the oiling agent comprises poly(oxymethylene).